

=> d his

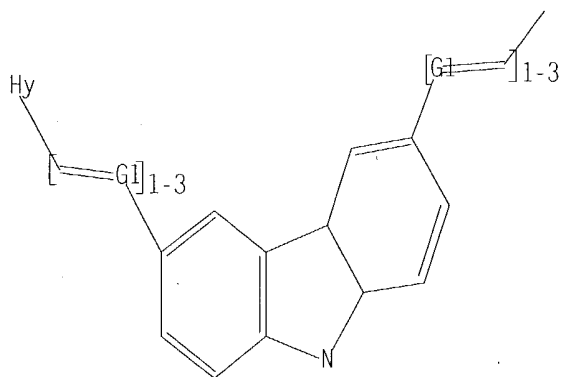
(FILE 'HOME' ENTERED AT 14:29:29 ON 10 SEP 2004)

FILE 'REGISTRY' ENTERED AT 14:29:37 ON 10 SEP 2004

L1 STRUCTURE UPLOADED
L2 0 S L1
L3 144 S L1 FULL
L4 STRUCTURE UPLOADED
L5 0 S L1 NOT L4
L6 37 S L5 FULL

=> d que 16 stat

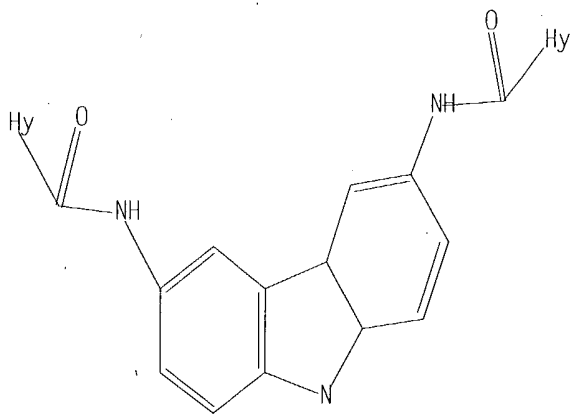
L1 STR



G1 N,CH

Structure attributes must be viewed using STN Express query preparation.

L4 STR



Structure attributes must be viewed using STN Express query preparation.

L6 37 SEA FILE=REGISTRY SSS FUL L1 NOT L4

64.5% PROCESSED 400000 ITERATIONS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.09

37 ANSWERS

FULL FILE PROJECTIONS: ONLINE **INCOMPLETE**
 BATCH **INCOMPLETE**
PROJECTED ITERATIONS: 619811 TO 619811
PROJECTED ANSWERS: 37 TO 79

=> fil cap1

FILE 'CAPLUS' ENTERED AT 14:36:25 ON 10 SEP 2004

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PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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FILE COVERS 1907 - 10 Sep 2004 VOL 141 ISS 12

FILE LAST UPDATED: 9 Sep 2004 (20040909/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

'.FIONA' IS DEFAULT FORMAT FOR 'CAPLUS' FILE

=> s 16

L7 15 L6

=> d 1-15 bib abs hitstr

L7 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2004:651328 CAPLUS

DN 141:170427

TI Two-photon absorbing compounds and method for fluorescent labeling with the compounds

IN Inagaki, Yoshio; Takizawa, Hiroo; Akiba, Masaharu

PA Fuji Photo Film Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 14 pp.

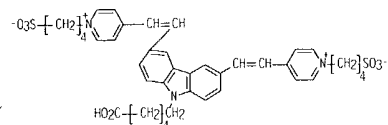
CODEN: JKKXXAF

DT Patent

LA Japanese

FAN_CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2004224746	A2	20040812	JP 2003-15683	20030124
PRAI JP 2003-15683		20030124		
GI				



AB Substances are labeled by reacting with two-photon absorbing compds. represented by G(L)nA (G = reactive group forming a covalent bond with the substances; L = linking group; A = organic group derived from HA having two-photon absorption cross section of ≥ 1000 GM; n = 0, 1). Fluorometry using the two-photon absorbing compds. shows large difference between excitation wavelength and fluorescence wavelength, good three-dimensional spatial resolution, and high sensitivity. Two-photon fluorescence ratio of some compds. were given. Thus, an aqueous gelatin solution was treated with a carbazole derivative having 1 CO2H and 2 SO3- groups (represented by I) and irradiated with 780-nm laser in the dark to generate bluish-green fluorescence only near the focal point.

IT 733805-46-4

RL: ARG (Analytical reagent use); PRP (Properties); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent); USES (Uses) (two-photon absorbing compds. and method for two-photon fluorescent labeling with the compds.)

RN 733805-46-4 CAPLUS

CN INDEX NAME NOT YET ASSIGNED

L7 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2004:534581 CAPLUS

DN 141:187283

TI Detection of quadruplex DNA structures in human telomeres by a fluorescent carbazole derivative

AU Chang, Cheng-Chung; Kuo, I.-Chun; Ling, I.-Fang; Chen, Chin-Tin; Chen, Huei-Chin; Lou, Pei-Jen; Lin, Jing-Jer; Chang, Ia-Chau

CS Institute of Atomic and Molecular Sciences, Academia Sinica, Taipei, 106, Taiwan

SO Analytical Chemistry (2004), 76(15), 4490-4494

CODEN: ANCHAM; ISSN: 0003-2700

PB American Chemical Society

DT Journal

LA English

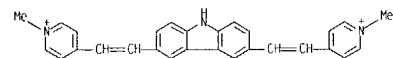
AB Single-stranded telomeric DNA tends to form a four-base-paired planar structure termed G-quadruplex. This structure was easily formed in vitro in the presence of monovalent cations. However, the existence of this structure in native human telomeres is unclear. Here we address this important question through the distinctive properties of 3,6-bis(1-methyl-4-vinylpyridinium)carbazole diiodide (BMVC) upon binding to various DNA structures. Although the fluorescence of BMVC increases significantly in the presence of DNA, BMVC has high sensitivity and binding preference to quadruplex d(T2AG3)4 over duplex DNA. In addition, the fluorescent emissions were characterized around 575 nm for quadruplex d(T2AG3)4 and 545 nm for most of duplex DNA. The 575-nm fluorescence emissions were detected in the mixts. of 2 nM BMVC with the chromosomal DNA that were extracted from human cells, suggesting the presence of quadruplex structure in human nucleus. Further analyzing the BMVC fluorescence at the ends of metaphase chromosomes and other regions of chromosomes, we detected the quadruplex-binding BMVC fluorescence at telomere-proximal regions. Together these results provide the first evidence for the presence of quadruplex structures in human telomeres.

IT 319018-38-7

RL: ARU (Analytical role, unclassified); ANST (Analytical study) (detection of quadruplex DNA structures in human telomeres by fluorescent carbazole derivative)

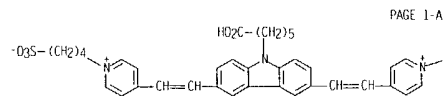
RN 319018-38-7 CAPLUS

CN Pyridinium, 4,4'-(9H-carbazole-3,6-diyl-di-2,1-ethenediyl)bis[1-methyl-(9CI)] (CA INDEX NAME)



RE_CNT 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



PAGE 1-A

PAGE 1-B

-(CH2)4-SO3-

L7 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2003:779495 CAPLUS

DN 140:2484

TI A fluorescent carbazole derivative: high sensitivity for quadruplex DNA

AU Chang, Cheng-Chung; Wu, Jin-Yi; Chien, Chih-Wei; Wu, Wei-Sung; Liu, Heng;

Kang, Chi-Chih; Yu, Liang-Jye; Chang, Ia-Chau

CS Institute of Atomic and Molecular Sciences, Academia Sinica, Taipei, 10764, Taiwan

SO Analytical Chemistry (2003), 75(22), 6177-6183

CODEN: ANCHAM; ISSN: 0003-2700

PB American Chemical Society

DT Journal

LA English

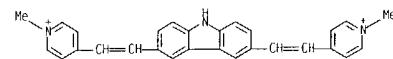
AB We have synthesized a novel mol., 3,6-bis(1-methyl-4-vinylpyridinium)carbazole diiodide (BMVC), for recognizing specific quadruplex structures, particularly the quadruplex of human telomeric sequence d(T2AG3)4. The fluorescence intensity of the BMVC mol. increases from 1 to almost 2 orders of magnitude upon interacting with various DNAs. At a concentration of BMVC of 10 μ M, fluorescence bands with different colors of BMVC in electrophoresis gels of various DNAs can be observed. The fluorescence of BMVC can be used to discriminate between duplex and quadruplex DNAs. At the low concentration of 0.1 μ M BMVC in prestained gels, the fluorescence is observed in the presence of quadruplexes with anti-anti-anti-anti and anti-anti-syn-syn arrangements. However, no fluorescence band is detected upon interacting with duplexes and quadruplexes with anti-syn-anti-syn arrangement. Moreover, the sensitivity assays show that as little as 0.2 pmol of quadruplex of d(T2AG3)4 can be revealed by BMVC.

IT 627810-06-4

RL: ARU (Analytical role, unclassified); ANST (Analytical study) (fluorescent carbazole derivative: high sensitivity for quadruplex DNA)

RN 627810-06-4 CAPLUS

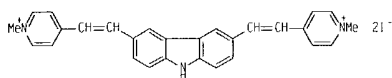
CN Pyridinium, 4,4'-(9H-carbazole-3,6-diyl-di-2,1-ethenediyl)bis[1-methyl-diiodide (9CI)] (CA INDEX NAME)



● 1-

RE_CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
 AN 2003:526989 CAPLUS
 DN 140:128227
 TI Synthesis of a carbazole derivative for stabilizing the quadruplex structure
 AU Chang, Cheng-Chung; Wu, Jin-Yi; Chang, Ta-Chau
 CS Institute of Atomic and Molecular Sciences, Academia Sinica, Taipei, 106, Taiwan
 SO Journal of the Chinese Chemical Society (Taipei, Taiwan) (2003), 50(2), 185-188
 CODEN: JCCTAC; ISSN: 0009-4536
 PB Chinese Chemical Society
 DT Journal
 LA English
 OS CASREACT 140:128227
 GI



AB The new mol. 3,6-bis(1-methyl-4-vinylpyridinium iodide)carbazole (BMVC, 1) was synthesized for stabilizing the quadruplex structure of human telomeric sequence d(T2AG3)4 in vitro. Mixing BMVC with the DNA can raise the melting temperature of the d(T2AG3)4 by approx. 13°, implying that BMVC could be a useful telomerase inhibitor. In addition, the fluorescence of the BMVC increased significantly upon interacting with the d(T2AG3)4, which may be useful as a G-quadruplex specific marker.

IT 647859-38-9
 RL: PRP (Properties)
 (fluorescence; preparation of carbazole derivative for stabilizing quadruplex structure of human telomeric DNA)
 RN 647859-38-9 CAPLUS
 CN DNA: d(T-T-A-G-G-G-T-T-A-G-G-G-T-T-A-G-G-G), compd. with 4,4'-[9H-carbazole-3,6-diyl-di-(1E)-2,1-ethenediyl]bis[1-methylpyridinium] diiodide (1:1) (9C1) (CA INDEX NAME)

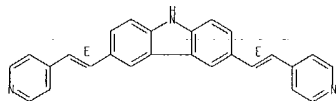
CM 1

CRN 647859-37-8
 CMF C28 H25 N3 . 2 1

Double bond geometry as shown.

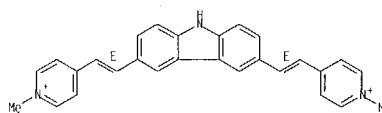
L7 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
 (prepn. of carbazole deriv. for stabilizing quadruplex structure of human telomeric DNA)
 RN 647859-36-7 CAPLUS
 CN 9H-Carbazole, 3,6-bis[(1E)-2-(4-pyridinyl)ethenyl]- (9C1) (CA INDEX NAME)

Double bond geometry as shown.



RE CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



● 2 1-

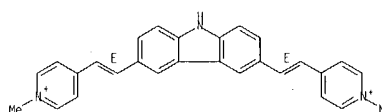
CM 2

CRN 125478-80-0
 CMF Unspecified
 CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 647859-37-8P
 RL: BSU (Biological study, unclassified); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
 (preparation of carbazole derivative for stabilizing quadruplex structure of human telomeric DNA)
 RN 647859-37-8 CAPLUS
 CN Pyridinium, 4,4'-[9H-carbazole-3,6-diyl-di-(1E)-2,1-ethenediyl]bis[1-methyl-, diiodide (9C1) (CA INDEX NAME)

Double bond geometry as shown.



● 2 1-

IT 647859-36-7P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

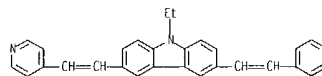
L7 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2003:56348 CAPLUS
 DN 138:114755
 TI Composite for two photon absorption
 IN Inagaki, Yoshio; Akiba, Masaharu; Harada, Akinori; Tani, Takeharu
 PA Fuji Photo Film Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 14 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN CNT 2 -

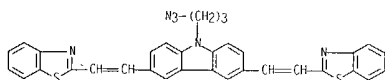
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
P1 JP 2003020469	A2	20030124	JP 2001-206780	20010706
US 2003052311	A1	20030320	US 2002-188959	20020705
PRA1 JP 2001-206780	A	20010706		
JP 2001-212310	A	20010712		

AB The invention refers to a composite with a two-photon absorption cross section > 102 Goppert-Mayers (GM) where 1 GM = 1 x 10⁻⁵⁰ cm⁴ s mol⁻¹ photon⁻³ in order to achieve two photon absorption using relatively low-powered lasers.

IT 437713-19-4
 RL: DEV (Device component use); USES (Uses)
 (conjugated aryl amine and luminescent compound as composite for two photon absorption)
 RN 437713-19-4 CAPLUS
 CN 9H-Carbazole, 9-ethyl-3,6-bis[2-(4-pyridinyl)ethenyl]- (9C1) (CA INDEX NAME)



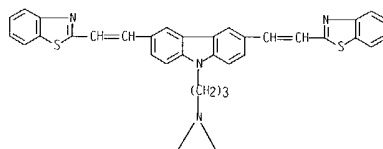
L7 ANSWER 6 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
 AN 2002:619878 CAPLUS
 DN 138:89716
 TI Synthesis of new C60-based dyads containing carbazole and benzothiazole moieties
 AU Wang, Shu; Li, Yuliang; Shi, Zhiqiang; Du, Chimin; Fang, Hongjuan; Xiao, Shengxiang; Zhou, Yunshen; Zhu, Daoben
 CS Center for Molecular Sciences, Institute of Chemistry, Chinese Academy of Sciences, Beijing, 100080, Peop. Rep. China
 SO Synthetic Communications (2002), 32(16), 2507-2512
 CODEN: SYNCAV; ISSN: 0039-7911
 PB Marcel Dekker, Inc.
 DT Journal
 LA English
 OS CASREACT 138:89716
 AB Two synthetic routes were studied for the title compds.
 IT 484674-31-9P 484674-33-1P
 RL RCT (Reactant): SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (two routes to new C60-based dyads containing carbazole and benzothiazole moieties)
 RN 484674-31-9 CAPLUS
 CN 9H-Carbazole, 9-(3-azidopropyl)-3,6-bis[2-(2-benzothiazolyl)ethenyl]- (9CI) (CA INDEX NAME)



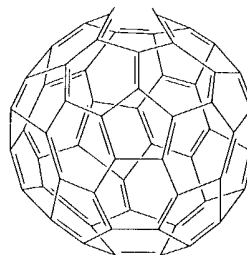
RN 484674-33-1 CAPLUS
 CN 2a-Aza-1,2(2a)-homo[5,6]fullerene-C60-1h, 2a-[3-[3,5-bis[2-(2-benzothiazolyl)ethenyl]-9H-carbazol-9-yl]propyl]- (9CI) (CA INDEX NAME)

L7 ANSWER 6 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 1-A



PAGE 2-A



RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
 AN 2002:458216 CAPLUS
 DN 137:39382
 TI 2,2'-Bridged biphenyl compound, optical recording material, and recording method
 IN Akiba, Masaharu
 PA Fuji Photo Film Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 20 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

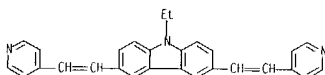
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002172864	A2	20020618	JP 2001-110119	20010409
PRA1	JP 2000-297219	A	20000928		
OS	MARPAT 137:39382				

G1

L7 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Laser-sensitive optical recording material contains I [X = CR1R2, NR3, O, S, Se; R1-3 = alkyl, alkenyl, alkynyl, aryl, heterocycle (these may be substituted); R = substituent; n1-2 = 0-4]. The material is recorded by using 22 photon absorption induced by irradiation of laser beam with wavelength having no linear absorption and lower than linear absorption band of I. Five other 2,2'-bridged biphenyl compds. such as II, III, and IV [R1-2, R4, R13-14 = alkyl, alkenyl, alkynyl, aryl, heterocycle (these may be substituted); R5-8 = substituent; R15 = (substituted) heterocycle; XY = Y-valent anion; Y = 1-5; h = 0-4; j = 0-6; i = 0-10; p = 0-2n; m = 0-5] are also claimed. The material shows high d. and capacity recording without using short-wavelength laser.
 IT 437713-19-4P
 RL DEV (Device component use): PNU (Preparation, unclassified): PREP (Preparation): USES (Uses)
 (optical recording material containing bridged biphenyl compound)
 RN 437713-19-4 CAPLUS
 CN 9H-Carbazole, 9-ethyl-3,6-bis[2-(4-pyridinyl)ethenyl]- (9CI) (CA INDEX NAME)



L7 ANSWER 8 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:108044 CAPLUS

DN 136:379109

TI Structural dependence of the selectivity of fluorescent chemosensors to Mg^{2+} from alkali earth metal ions

AU Pei, Jian; Ding, Ai-Lin; Yu, Wang-Lin; Lai, Yee-Hing

CS Institute of Materials Research and Engineering, National University of Singapore, Singapore, 117602, Singapore

SO Macromolecular Rapid Communications (2002), 23(1), 21-25
CODEN: MRCOE3; ISSN: 1022-1336

PB Wiley-VCH Verlag GmbH

DT Journal

LA English

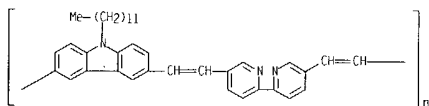
AB Novel 2,2'-bipyridylene-containing conjugated polymers were synthesized through the Wittig reaction. Some of these polymers show a highly selective affinity toward Mg^{2+} in a mixture of alkaline earth metal ions, which is different from the 2,2'-bipyridylene-containing poly(phenylene vinylene) derivs. reported previously. This is the 1st case to demonstrate that some materials show a selectivity toward Mg^{2+} . The structures of the polymers may play a crucial role for this selectivity.

IT 423760-68-3P

RL: ARG (Analytical reagent use); PRP (Properties); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses) (structural dependence of the selectivity of fluorescent chemosensors to Mg^{2+} from alkali earth metal ions)

RN 423760-68-3 CAPLUS

CN Poly[(9-dodecyl-9H-carbazole-3,6-diyl)-1,2-ethenediyl][2,2'-bipyridine]-5,5'-diyl-1,2-ethenediyl] (9C1) (CA INDEX NAME)



RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE.FORMAT

L7 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:532628 CAPLUS

DN 135:241856

TI Theoretical study TPA properties of a series of two-dimensional charge-transfer derivatives

AU Zhou, Yu-Fang; Meng, Fan-Qing; Zhao, Xian; Feng, Sheng-Yu; Jiang, Min-Hu
CS State Key Laboratory of Crystal Materials, Department of Physics, Shandong University, Jinan, 250100, Peop. Rep. China

SO Chemical Physics (2001), 269(1-3), 441-445

CODEN: CMPHC2; ISSN: 0301-0104

PB Elsevier Science B.V.

DT Journal

LA English

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB A new series of two-dimensional charge-transfer chromophore (I and II: $R=C_6H_3H.Me.Et$; $X=$ tetrafluoroborate) were designed and two of them were synthesized. Both theor. and exptl. results show there is no linear absorption in 620-1200 nm, so two-photon properties can be expected in this range. Two-photon absorption (TPA) cross-sections were theor. studied by using quantum-chemical INDO/C1 method combined with sum-over-states expression. The results suggest those compds. possess large TPA cross-sections as well as appropriate corresponding wavelengths, implying that they are good candidates for two-photon applications.

IT 281193-76-8 360062-70-0 360062-72-2

360062-74-4

RL: PRP (Properties) (quantum chemical study of two-photon absorption of two-dimensional charge-transfer compds.)

RN 281193-76-8 CAPLUS

CN Pyridinium, 4,4'-[(9-hexyl-9H-carbazole-3,6-diyl)di-(1E)-2,1-ethenediyl]bis[1-(2-hydroxyethyl)-, bis[tetraphenylborate(1-)] (9C1) (CA INDEX NAME)

CM 1

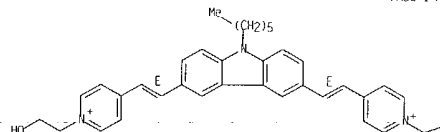
CRN 281193-75-7

CMF C36 H41 N3 O2

Double bond geometry as shown.

L7 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 1-A



PAGE 1-B

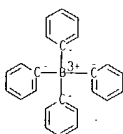


CM 2

CRN 4358-26-3

CMF C24 H20 B

CCI CCS



RN 360062-70-0 CAPLUS

CN Pyridinium, 4,4'-[(9H-carbazole-3,6-diyl)di-(1E)-2,1-ethenediyl]bis[1-(2-hydroxyethyl)-, bis[tetraphenylborate(1-)] (9C1) (CA INDEX NAME)

CM 1

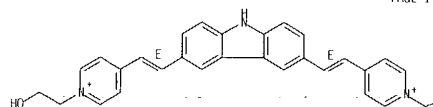
CRN 360062-69-7

CMF C30 H29 N3 O2

L7 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

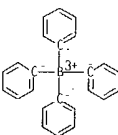


CM 2

CRN 4358-26-3

CMF C24 H20 B

CCI CCS



RN 360062-72-2 CAPLUS

CN Pyridinium, 4,4'-[(9-methyl-9H-carbazole-3,6-diyl)di-(1E)-2,1-ethenediyl]bis[1-(2-hydroxyethyl)-, bis[tetraphenylborate(1-)] (9C1) (CA INDEX NAME)

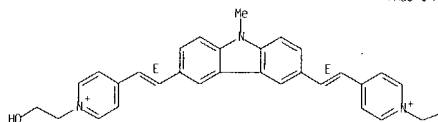
CM 1

CRN 360062-71-1

CMF C31 H31 N3 O2

L7 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
Double bond geometry as shown.

PAGE 1-A

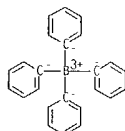


PAGE 1-B



CM 2

CRN 4358-26-3
CMF C24 H20 B
CCI CCS



RN 360062-74-4 CAPLUS
CN Pyridinium, 4,4'-[(9-ethyl-9H-carbazole-3,6-diyl)di-(1E)-2,1-ethenediyl]bis[1-(2-hydroxyethyl)-, bis[tetraphenylborate(1-)] (9CI) (CA INDEX NAME)

CM 1

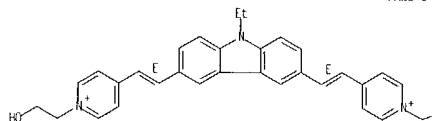
L7 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

L7 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

CRN 360062-73-3
CMF C32 H33 N3 O2

Double bond geometry as shown.

PAGE 1-A

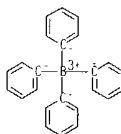


PAGE 1-B



CM 2

CRN 4358-26-3
CMF C24 H20 B
CCI CCS



RE CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2000:901809 CAPLUS

DN 134:163425

TI Synthesis and characterization of a new lambda-type polymer for nonlinear optics based on carbazole derivative salt

AU Meng, Fangqing; Ren, Quan; Xu, Dong; Yuan, Duorong; Lu, Mengkai; Zhang, Guanghui; Guo, Shiyi; Zhao, Xian; Wang, Xinqiang; Fang, Changshui; Xu, Gang; Liu, Xuchun; Ye, Peixian

CS New Materials Group, National Key Laboratory of Crystal Material, Shandong University, Jinan, 250100, Peop. Rep. China

SO Reactive & Functional Polymers (2000): 46(1), 59-65

CODEN: RFPOF6; ISSN: 1381-5148

PB Elsevier Science B.V.

DT Journal

LA English

AB A new pyridinium ionene polymer containing carbazole derivative salt was synthesized by the copolymerization of 3,6-diformyl-N-hexylcarbazole with N,N'-(1,6-hexanediyl)bis(4-methylpyridinium) bis(tetraphenylborate). The second-order nonlinear optical coeffs. of the spin-coated polymer film were determined by the Maker fringe method using a Q-switched Nd:YAG laser (1064 nm) after corona-poling. The d33 and d31 values were 8.3 and 2.3 pm/V, resp.

IT 324757-07-5P, N,N'-(1,6-Hexanediyl)bis(4-methylpyridinium) bis(tetraphenylborate)-N-hexyl-3,6-carbazoledicarboxaldehyde copolymer.

SRU

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(preparation and NLO properties of ionene polymer containing carbazole units)

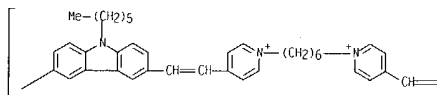
RN 324757-07-5 CAPLUS

CN Poly[(9-hexyl-9H-carbazole-3,6-diyl)-1,2-ethenediylpyridinium-4,1-diyl-1,6-hexanediylpyridinium-1,4-diyl-1,2-ethenediyl bis[tetrafluoroborate(1-)] (9CI) (CA INDEX NAME)

CM 1

CRN 324757-06-4
CMF (C38 H43 N3)n
CCI PMS

PAGE 1-A



L7 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 1-B



CM 2

CRN 14874-70-5
CMF B F4
CCI CCS



RE.CNT 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2000:835265 CAPLUS

DN 133:367677

TI Organic electroluminescent devices

IN Tamano, Michiko

PA Toyo Ink Mfg. Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho. 32 pp.

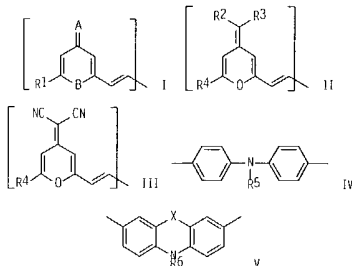
CODEN: JXXXXF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2000328052	A2	20001128	JP 1999-135498	19990517
PRAI JP 1999-135498		19990517		
GI				



AB The devices comprise I, II, III, IV and V (R1 = H, (substituted) alkyl, (substituted) aryl; A = O, methylene; B = O, S; R2,3 = H, cyano, halo, alkylcarbonyl, alkoxycarbonyl, cannot be H simultaneously, may form a ring; R4-6 = H, (substituted) alkyl, (substituted) aryl; X = direct bonding, divalent (substituted) alkyl, divalent (substituted) aryl, O, S, (substituted) N, carbonyl, thiocarbonyl).

IT 307519-17-1 307519-18-2 307519-19-3

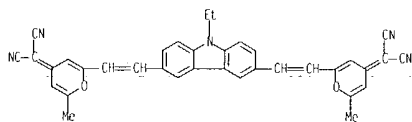
307519-23-9

RL: DEV (Device component use); USES (Uses)
(organic electroluminescent devices)

L7 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

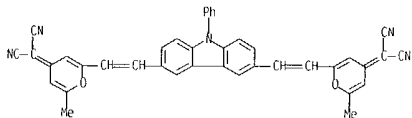
RN 307519-17-1 CAPLUS

CN Propanedinitrile, 2,2'-[[9-ethyl-9H-carbazole-3,6-diyl]bis[2,1-ethenediyl(6-methyl-4H-pyran-2-yl-4-ylidene)]]bis- (9CI) (CA INDEX NAME)



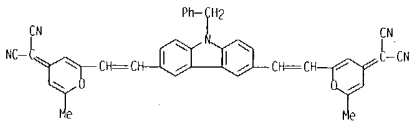
RN 307519-18-2 CAPLUS

CN Propanedinitrile, 2,2'-[[9-phenyl-9H-carbazole-3,6-diyl]bis[2,1-ethenediyl(6-methyl-4H-pyran-2-yl-4-ylidene)]]bis- (9CI) (CA INDEX NAME)



RN 307519-19-3 CAPLUS

CN Propanedinitrile, 2,2'-[[9-(phenylmethyl)-9H-carbazole-3,6-diyl]bis[2,1-ethenediyl(6-methyl-4H-pyran-2-yl-4-ylidene)]]bis- (9CI) (CA INDEX NAME)

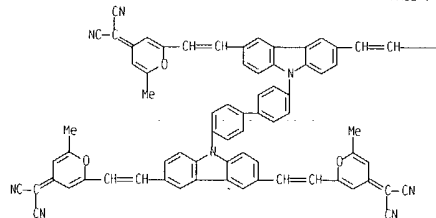


RN 307519-23-9 CAPLUS

CN Propanedinitrile, 2,2',2'',2'''-[[[1,1'-biphenyl]-4,4'-diyl]bis[9H-carbazole-9,3,6-triyl]bis[2,1-ethenediyl(6-methyl-4H-pyran-2-yl-4-ylidene)]]]tetrakis- (9CI) (CA INDEX NAME)

L7 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 1-A



PAGE 1-B



L7 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:819764 CAPLUS
DN 134:107619

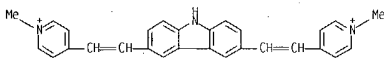
TI Linear and nonlinear optical properties of novel ionic chromophores
AU Duan, Xuan-Ming; Wada, Tatsuo; Okada, Shuji; Oikawa, Hidetoshi; Matsuda, Hiro; Sasabe, Hiroyuki; Nakanishi, Hachiro
CS Biopolymer Physics Laboratory, The Institute of Physical and Chemical Research (RIKEN), Saitama, 351-0198, Japan
SO Materials Research Society Symposium Proceedings (2000), 598(Electrical, Optical, and Magnetic Properties of Organic Solid-State Materials V), BB3.31/1-BB3.31/6
CODEN: MRSPOH; ISSN: 0272-9172
PB Materials Research Society
DT Journal
LA English

AB Novel ionic chromophores consisting of a carbazole moiety and pyridinium rings connected by a double bond were designed and synthesized as nonlinear optical materials. Their linear and nonlinear optical properties were studied by semiempirical calcul. and experiment. The absorption maximum wavelengths (λ_{max}) of these ionic chromophores showed shifting to longer wavelength region than their corresponding elec. neutral compds. These ionic chromophores possess large 1st hyperpolarizabilities (β).
IT 319018-38-7P 319018-40-1P

RL: PNU (Preparation, unclassified); PRP (Properties); PREP (Preparation) (failed synthesis and calculated dipole moment and hyperpolarizability of novel ionic chromophores)

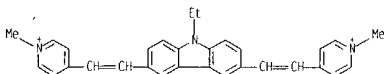
RN 319018-38-7 CAPLUS

CN Pyridinium, 4,4'-[(9H-carbazole-3,6-diyl)di-2,1-ethenediyl]bis[1-methyl- (9CI) (CA INDEX NAME)



RN 319018-40-1 CAPLUS

CN Pyridinium, 4,4'-[(9-ethyl-9H-carbazole-3,6-diyl)di-2,1-ethenediyl]bis[1-methyl- (9CI) (CA INDEX NAME)



L7 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:799173 CAPLUS
DN 134:159233

TI Novel chromogenic substrates with metal chelating properties for the histochemical detection of peroxidase activity, derived from 3-amino-9-ethylcarbazole (AEC) and 3,6-diamino-9-ethylcarbazole
AU Krieg, Reimar; Halbhuer, Karl-Jürgen; Oehring, H.
CS Institute of Anatomy/Anatomy II, Friedrich Schiller University Jena, Jena, 07743, Germany

SO Cellular and Molecular Biology (Paris) (2000), 46(7), 1191-1212
CODEN: CMOBEF; ISSN: 0145-5680

PB C.M.B. Association
DT Journal
LA English

AB For staining of peroxidase activity, 3-amino-9-ethylcarbazole (AEC) was chemical modified in order to obtain chromogenic enzyme substrates with improved staining properties. Through systematic structure/staining considerations of a series of novel substrates, it can be generalized that the performance of traditional chromogenic peroxidase amine-substrates is accessible and a considerably improvement in terms of sensitivity and adaptability for various application purposes (solubility and color of the reaction product, electron dense and osmophilic properties,...) can be obtained by attachment of chelating N-benzyl-moieties and making available the well known metal catalytic effect in a proposed intramol. way. Thus, the model compds. 3-(arylmethyl)amino-9-ethyl-carbazole [I] and 3,6-bis-(arylmethyl)amino-9-ethyl-carbazole [II] were synthesized by condensation of 3-amino-9-ethylcarbazole (AEC) or the corresponding 3,6-diamine with aromatic aldehydes. The resulting Schiff bases were subsequently reduced with sodium borohydride. The obtained benzylamines I and II were examined as chromogenic substrates: (1) qual. in test tube expts. concerning color, precipitation behavior and solubility of the ppts., (2) quant. by means of electroblotted dilution series of horseradish peroxidase, and finally in a biol. environment for the localization of endogenous peroxidase activity (3) in native cryotome tissues of Wistar rats. (4) The usefulness of the new approach for electron microscopy was revealed, too. Thus the discrimination between internum and externum of specific granules after osmium tetroxide treatment was higher if compared with results obtained by the Karnovsky protocol. The wide spread variation of substitution patterns of the novel reagents gave reason for structure-reactivity considerations and ongoing leading structures. The stereochem. and electronic factors as well as competing reaction pathways governing the reaction course are briefly discussed. In addition, the metal associating reagents are highly effective in oxidative side-coupling reactions with aromatic amine or phenol-additives exemplified here by means of 4-amino-N,N-diphenylamine. The reagents I and II are obtainable in a simple in situ synthesis, too, offering in principle a "chemical construction unit". The demonstrated approach is of general interest for bioanal. applications offering an access to potentially novel chromogens and electron opaque markers for the detection of peroxidase activity/hydroperoxides or related redox enzyme systems.
IT 325158-94-9P

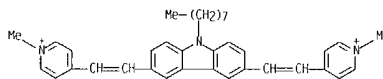
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

L7 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
IT 319018-41-2P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (synthesis and linear and nonlinear optical properties of novel ionic chromophores)

RN 319018-41-2 CAPLUS

CN Pyridinium, 4,4'-[(9-octyl-9H-carbazole-3,6-diyl)di-2,1-ethenediyl]bis[1-methyl- (9CI) (CA INDEX NAME)



RE CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

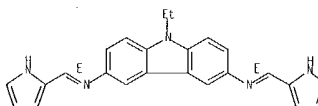
L7 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
(Reactant or reagent)

(novel chromogenic substrates with metal chelating properties derived from 3-amino-9-ethylcarbazole (AEC) and 3,6-diamino-9-ethylcarbazole for histochem. detection of peroxidase activity)

RN 325158-94-9 CAPLUS

CN 9H-Carbazole-3,6-diamine, 9-ethyl-N,N'-bis(1H-pyrrol-2-ylmethylene)-, dihydrochloride, [N(E).N'(E)]- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

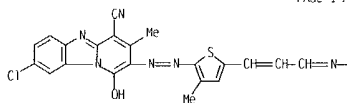


●2 HCl

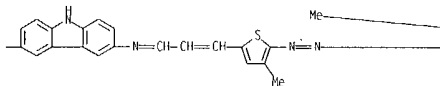
RE CNT 81 THERE ARE 81 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

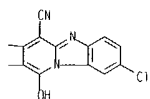
PAGE 1-A



PAGE 1-B



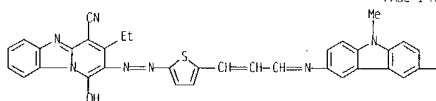
PAGE 1-C



RN 133266-87-2 CAPLUS

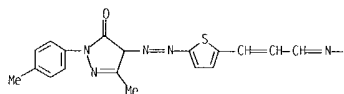
CN 3H-Pyrazol-3-one, 4,4'-[(9-methyl-9H-carbazole-3,6-diyl)bis(nitrilo-1-propen-1-yl-3-ylidene-5,2-thiophenediylazo)]bis[7-ethyl-9-hydroxy- (9CI) (CA INDEX NAME)

PAGE 1-A

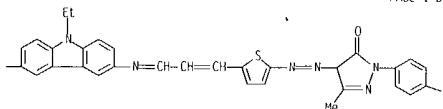


L7 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 1-A



PAGE 1-B



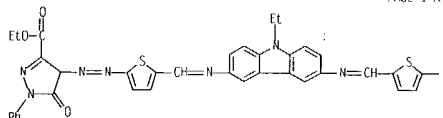
PAGE 1-C

Me

RN 133266-90-7 CAPLUS

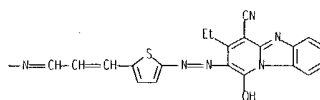
CN 1H-Pyrazole-3-carboxylic acid, 4,4'-[(9-ethyl-9H-carbazole-3,6-diyl)bis(nitrilo-1-propen-1-yl-3-ylidene-5,2-thiophenediylazo)]bis[4,5-dihydro-5-oxo-1-phenyl-, diethyl ester (9CI) (CA INDEX NAME)

PAGE 1-A



L7 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

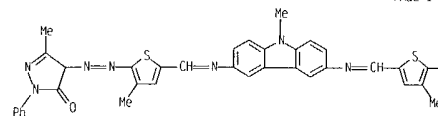
PAGE 1-B



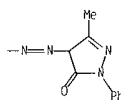
RN 133266-88-3 CAPLUS

CN 3H-Pyrazol-3-one, 4,4'-[(9-methyl-9H-carbazole-3,6-diyl)bis(nitrilo-1-propen-1-yl-3-ylidene-5,2-thiophenediylazo)]bis[2,4-dihydro-5-methyl-2-phenyl- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

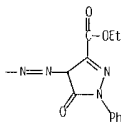


RN 133266-89-4 CAPLUS

CN 3H-Pyrazol-3-one, 4,4'-[(9-ethyl-9H-carbazole-3,6-diyl)bis(nitrilo-1-propen-1-yl-3-ylidene-5,2-thiophenediylazo)]bis[2,4-dihydro-5-methyl-2-(4-methylphenyl)- (9CI) (CA INDEX NAME)

L7 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

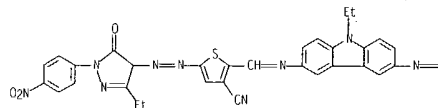
PAGE 1-B



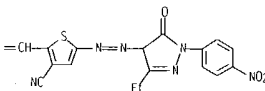
RN 133266-91-8 CAPLUS

CN 3-Thiophenecarbonitrile, 2,2'-[(9-ethyl-9H-carbazole-3,6-diyl)bis(nitrilo-1-propen-1-yl-3-ylidene-5,2-thiophenediylazo)]bis[5-oxo-1H-pyrazol-4-yl]azo- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

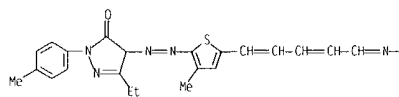


RN 133266-92-9 CAPLUS

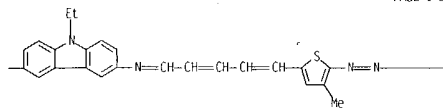
CN 3H-Pyrazol-3-one, 4,4'-[(9-ethyl-9H-carbazole-3,6-diyl)bis(nitrilo-1,3-pentadien-1-yl-5-ylidene(3-methyl-5,2-thiophenediylazo)]bis[5-ethyl-2,4-dihydro-2-(4-methylphenyl)- (9CI) (CA INDEX NAME)

L7 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

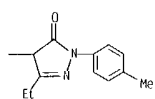
PAGE 1-A



PAGE 1-B



PAGE 1-C

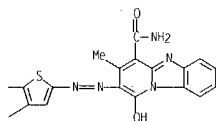


RN 133294-09-4 CAPLUS

CN Pyrido[1,2-a]benzimidazole-4-carboxamide, 2,2'-[(9-methyl-9H-carbazole-3,6-diyl)bis[nitrilomethylidene(4-cyano-5,2-thiophenediyl)azo]]bis[3-ethyl-1-hydroxy- (9CI) (CA INDEX NAME)

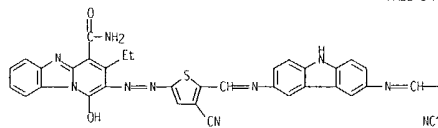
L7 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 1-B

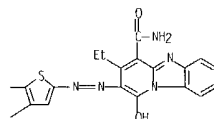


L7 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 1-A



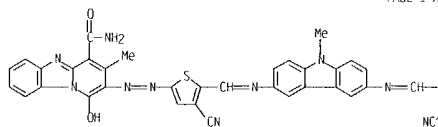
PAGE 1-B



RN 133294-10-7 CAPLUS

CN Pyrido[1,2-a]benzimidazole-4-carboxamide, 2,2'-[(9-methyl-9H-carbazole-3,6-diyl)bis[nitrilomethylidene(4-cyano-5,2-thiophenediyl)azo]]bis[1-hydroxy-3-methyl- (9CI) (CA INDEX NAME)

PAGE 1-A



=> => d que l12 stat

L8	53	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	"CHANG TA CHAU"/AU
L9	10	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	"CHANG CHENG CHUNG"/AU
L10	13	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	"WU JIN YI"/AU
L11	62	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	L8 OR L9 OR L10
L12	4	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	L11 AND CARBAZOLE

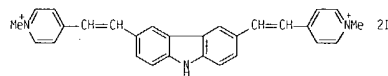
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L12 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN
 AN 2004:534581 CAPLUS
 DN 141:187283
 TI Detection of quadruplex DNA structures in human telomeres by a fluorescent carbazole derivative
 AU Chang, Cheng-Chung; Kuo, I.-Chun; Ling, I.-Fang; Chen, Chin-Tin; Chen, Hwei-Chin; Lou, Pei-Jen; Lin, Jing-Jer; Chang, Ta-Chau
 CS Institute of Atomic and Molecular Sciences, Academia Sinica, Taipei, 106, Taiwan
 SO Analytical Chemistry (2004), 76(15), 4490-4494
 CODEN: ANCHAM; ISSN: 0003-2700
 PB American Chemical Society
 DT Journal
 LA English
 AB Single-stranded telomeric DNA tends to form a four-base-paired planar structure termed G-quadruplex. This structure was easily formed in vitro in the presence of monovalent cations. However, the existence of this structure in native human telomeres is unclear. Here we address this important question through the distinctive properties of 3,6-bis(1-methyl-4-vinylpyridinium)carbazole diiodide (BMVC) upon binding to various DNA structures. Although the fluorescence of BMVC increases significantly in the presence of DNA, BMVC has high sensitivity and binding preference to quadruplex d(T2AG3)4 over duplex DNA. In addition, the fluorescent emissions were characterized around 575 nm for quadruplex d(T2AG3)4 and 545 nm for most of duplex DNA. The 575-nm fluorescence emissions were detected in the mixts. of 2 nM BMVC with the chromosomal DNA that were extracted from human cells, suggesting the presence of quadruplex structure in human nucleus. Further analyzing the BMVC fluorescence at the ends of metaphase chromosomes and other regions of chromosomes, we detected the quadruplex-binding BMVC fluorescence at telomere-proximal regions. Together these results provide the first evidence for the presence of quadruplex structures in human telomeres.
 RE.CNT 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN
 AN 2003:779495 CAPLUS
 DN 140:2484
 TI A fluorescent carbazole derivative: high sensitivity for quadruplex DNA
 AU Chang, Cheng-Chung; Wu, Jin-Yi; Chien, Chih-Wei; Wu, Wei-Sung; Liu, Heng; Kang, Chi-Chih; Yu, Liang-Jye; Chang, Ta-Chau
 CS Institute of Atomic and Molecular Sciences, Academia Sinica, Taipei, 10764, Taiwan
 SO Analytical Chemistry (2003), 75(22), 6177-6183
 CODEN: ANCHAM; ISSN: 0003-2700
 PB American Chemical Society
 DT Journal
 LA English
 AB We have synthesized a novel mol., 3,6-bis(1-methyl-4-vinylpyridium) carbazole diiodide (BMVC), for recognizing specific quadruplex structures, particularly the quadruplex of human telomeric sequence d(T2AG3)4. The fluorescence intensity of the BMVC mol. increases from 1 to almost 2 orders of magnitude upon interacting with various DNAs. At a concentration of BMVC of 10 μ M, fluorescence bands with different colors of BMVC in electrophoresis gels of various DNAs can be observed. The fluorescence of BMVC can be used to discriminate between duplex and quadruplex DNAs. At the low concentration of 0.1 μ M BMVC in prestained gels, the fluorescence is observed in the presence of quadruplexes with anti-anti-anti-anti and anti-anti-syn-syn arrangements. However, no fluorescence band is detected upon interacting with duplexes and quadruplexes with anti-syn-anti-syn arrangement. Moreover, the sensitivity assays show that as little as 0.2 pmol of quadruplex of d(T2AG3)4 can be revealed by BMVC.
 RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN
 AN 2003:630024 CAPLUS
 TI Interaction of a novel carbazole derivative with human telomere: a potent telomerase inhibitor
 AU Chang, Cheng Chung; Wu, Jin-Yi; Chang, Ta-Chau
 CS Institute of Atomic and Molecular Sciences, Academia Sinica, Taipei, 106, Taiwan
 SO Abstracts of Papers, 226th ACS National Meeting, New York, NY, United States, September 7-11, 2003 (2003). BIOL-156 Publisher: American Chemical Society, Washington, D. C.
 CODEN: 69EKY9
 DT Conference; Meeting Abstract
 LA English
 AB We have synthesized a novel mol. of 3,6-Bis(1-methyl-4-vinylpyridium) carbazole (BMVC) for stabilizing the quadruplex structure of human telomeric sequence of d(T2AG3)4 and inhibiting telomerase activity. Mixing BMVC with the d(T2AG3)4 can raise the melting temperature of the d(T2AG3)4 by approx. 13°C in vitro, implying that BMVC is a good quadruplex stabilizer. The IC50 value of BMVC (0.5 μ M) suggests that BMVC is a good telomerase inhibitor. On the other hand, the cell viability assay suggests that the cytotoxic EC50 values of BMVC concns. against a panel of human lung adenocarcinoma CL1-1 cells and mouse embryonic fibroblast NIH3T3 cells are similar and slightly larger than 20 μ M. Absorbance titration indicates the binding affinity of BMVC to d(T2AG3)4 larger than to [d(GCGCA2T2GCGC)]2. The observations of quadruplex stability, telomerase inhibitory activity, cellular cytotoxicity, and binding selectivity suggest that BMVC might be a good candidate for the application of clin. telomerase inhibitor.

L12 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN
 AN 2003:526989 CAPLUS
 DN 140:128227
 TI Synthesis of a carbazole derivative for stabilizing the quadruplex structure
 AU Chang, Cheng-Chung; Wu, Jin-Yi; Chang, Ta-Chau
 CS Institute of Atomic and Molecular Sciences, Academia Sinica, Taipei, 106, Taiwan
 SO Journal of the Chinese Chemical Society (Taipei, Taiwan) (2003), 50(2), 185-188
 CODEN: JCCCTAC; ISSN: 0099-4536
 PB Chinese Chemical Society
 DT Journal
 LA English
 OS CASREACT 140:128227
 GI



AB The new mol. 3,6-bis(1-methyl-4-vinylpyridinium iodide)carbazole (BMVC, 1) was synthesized for stabilizing the quadruplex structure of human telomeric sequence d(T2AG3)4 in vitro. Mixing BMVC with the DNA can raise the melting temperature of the d(T2AG3)4 by approx. 13°, implying that BMVC could be a useful telomerase inhibitor. In addition, the fluorescence of the BMVC increased significantly upon interacting with the d(T2AG3)4, which may be useful as a G-quadruplex specific marker.
 RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT